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| 10/664,675 | 09/18/2003 | Yin Zhengkai | 13936 B | 4065 |

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EXAMINER

MAYO III, WILLIAM H

ART UNIT

PAPER NUMBER

2831

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/664,675

Applicant(s)

ZHENGKAI ET AL.

Examiner

William H. Mayo III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 6 and 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-5 and 8-10, in the reply filed on October 4, 2004 is acknowledged.
2. Claims 6-9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Group II, there being no allowable generic or linking claim.

Priority

3. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in present Application No. 10/664,675, filed on October 4, 2004.

Drawings

4. The drawings are objected to because Figures 1-7 and 9-10 lack the proper cross-hatching, which indicates the type of materials, which may be in an invention. Specifically, the cross hatching to indicate the conductive and insulation materials is improper. The applicant should refer to MPEP Section 608.02 for the proper cross-hatching of materials. Correction is required.

Specification

5. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

6. The abstract of the disclosure is objected to because in lines 11-12 and 16, the abstract refers to purported merits or speculative applications. Correction is required.

See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-3 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Berg et al (Pat Num 3,069,579, herein referred to as Berg). Berg discloses an electroluminescence wire (Figs 1-5) which can be conformed into any desired shape and having a substantially uniform light output (Col 1, lines 10-14). Specifically, with respect to claim 1, Berg discloses an electroluminescence wire (10, Fig 5) comprising a flexible central electrode (12), wherein the flexible central electrode (12) is directly coated with an luminescent layer (14) and a transparent and conductive layer (16), wherein the luminescent layer (14) comprises granules of luminescent powder wrapped by synthetic resin (Col 2, lines 16-19), wherein the synthetic resin is transparent, insulating, and dielectric (Col 2, lines 24-26, i.e. epoxy resin), and the transparent and

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conductive layer (16) that may be surrounded by an accessory electrode (28, Col 3, lines 21-24). With respect to claim 2, Berg discloses that the transparent, insulating, and dielectric synthetic resin is epoxy resin (Col 2, lines 24-26). With respect to claim 3, Berg discloses that the luminescent powder in the luminescent layer is made from a mixture of copper and zinc sulfide (Col 2, lines 21-23). With respect to claim 8, Berg discloses that the linear luminescent core (10) is also covered by a layer of transparent polymer (30, i.e. light transmitting Polyvinyl chloride acetate, Col 3, lines 29-34).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berg (Pat Num 3,069,579). Berg discloses an electroluminescence wire (Figs 1-5) which can be conformed into any desired shape and having a substantially uniform light output (Col 1, lines 10-14) as disclosed above with reference to claim 1. Specifically, with respect to claim 5, Berg discloses that the transparent and conductive layer (16), that may be surrounded by an accessory electrode (28), which is a fine conductive wire (Col 3, lines 24-26).

However, Berg doesn't necessarily disclose the accessory electrode being at least two conductive wires (claim 5).

With respect to claim 5, it would have been obvious to one having ordinary skill in the art, at the time the invention was made to modify the accessory conductor to be at least two conductive wires, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. (*St. Regis Paper Co v. Bemis Co.*, 193 USPQ 8).

15. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berg (Pat Num 3,069,579) in view of Feldman et al (Pat Num 5,753,381, herein referred to as Feldman). Berg discloses an electroluminescence wire (Figs 1-5) which can be conformed into any desired shape and having a substantially uniform light output (Col 1, lines 10-14) as disclosed above with reference to claim 1. Specifically, with respect to claim 5, Berg discloses that the electroluminescence wire (10, Fig 5) comprising a flexible central electrode (12), wherein the flexible central electrode (12) is directly coated with a luminescent layer (14) and a transparent and conductive layer (16).

However, Berg doesn't disclose the central electrode being made of a single non metal wire or a multiple non metal wire adhered together using a conductive adhesive, or a conductive flexible tube or a weaved tube made from metal or non metal material (claim 4).

Feldman teaches an electroluminescent filament (Figs 1-10), which can be conformed into any desired shape and having a substantially light output (Col 2, lines 31-37) and has improved strength and cut resistance (Col 2, lines 19-22). Specifically, with respect to claim 4, Feldman teaches an electroluminescent wire (Fig 1) comprising a core conductor (101) that may be a single or multiple filamentary carbonaceous materials to provide additional strength and flexibility to the electroluminescent wire (Col 51-55).

With respect to claim 4, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the core conductor of Berg to comprise the core conductor configuration as taught by Feldman because Feldman teaches that such a configuration provides improved strength, cut resistance (Col 2, lines 19-22), and flexibility to the electroluminescent wire (Col 51-55) and since it has been held that a change in form cannot sustain patentability where involved is only extended application of obvious attributes from a prior art. *In re Span-Deck Inc. vs. Fab-Con Inc.* (CA 8, 1982) 215 USPQ 835.

16. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berg (Pat Num 3,069,579) in view of Baumberg et al (Pat Num 5,869,930, herein referred to as Baumberg). Berg discloses an electroluminescence wire (Figs 1-5) which

can be conformed into any desired shape and having a substantially uniform light output (Col 1, lines 10-14) as disclosed above with reference to claim 1.

However, Berg doesn't necessarily disclose two or more luminescent cores being in a row type and being coated them with a layer of transparent polymer (claim 9), nor a lotus root shape luminescent body having a circular combination made of two or more luminescent cores (claim 10).

Baumberg teaches an electroluminescence wire (Figs 1-12) having an increased electrical capacity and an increased brightness (Col 1, lines 33-37). Specifically, with respect to claim 9, Baumberg teaches an electroluminescent wire (Fig 9) comprising two or more luminescent cores (2, 4, 6, & 8) being arranged in a row type and being coated with a layer of transparent polymer (12, Col 4, lines 51-55). With respect to claim 10, Baumberg teaches a lotus root shape luminescent body (Fig 8) having a circular combination made of two or more luminescent cores (2, 4, 6, & 8) being coated with a layer of transparent polymer (12, Col 4, lines 41-43).

With respect to claims 9-10, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the electroluminescent wire of Berg to be utilized in a row of luminescent cores or a lotus root shape luminescent body, covered with a transparent outer polymer layer as taught by Baumberg because Baumberg teaches that such a configuration provides an electroluminescence wire (Figs 1-12) having an increased electrical capacity and an increased brightness (Col 1, lines 33-37) and it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed doesn't

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differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham, 2 USPQ 2d 1647 (1987).*

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Masaharu (Pat Num 3,278,784), Hosford (Pat Num 3,819,973), Mayer (Pat Num 4,841,259), Korte et al (Pat Num 6,736,674), Ryeczek (Pat Num 5,922,996), Falciglia et al (Pat Num 5,468,914), Feldman et al (Pat Num 5,876,863), Feldman et al (Pat Num 5,753,381), Dow (Pat Num 3,052,812), Voskoboinik et al (Pat Num 5,485,355), and Baumberg et al (Pat Num 6,074,071), all of which disclose various electroluminescence cores.

Communication

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (571)-272-1978. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William H. Mayo III
Primary Examiner
Art Unit 2831

WHM III
November 13, 2004